同济大学 TONGJI UNIVERSITY

报告题目： Targeting KDM5 histone demethylases in cancer: from biology to drug development

报 告 人： **Qin Yan, Ph.D.**

Associate Professor
Director, Epigenetics Program
Department of Pathology
Yale School of Medicine

主 持 人： 张勇 教授

时　　间： **2017 年 8 月 4 日周五上午 10:00**

地　　点： 医学大楼 1102 会议室

Abstract

Epigenetic aberrations often lead to cancer and other human diseases. The KDM5/JARID1 proteins are H3K4me3/2 demethylases. In addition to their roles in transcription regulation, we have also shown that KDM5 demethylases regulate alternative polyadenylation. Multiple lines of evidence showed that KDM5A/B contribute significantly to tumor formation, metastasis and drug resistance, and therefore are novel targets for cancer treatment. Drug development efforts have led to not only pan-KDM5 inhibitors, but also inhibitors with selective specificity against the KDM5 family members. High resolution crystal structures of KDM5A with diverse inhibitors showed how particular chemical moieties contribute to inhibitor potency and could lead to the successful design of selective and potent KDM5 inhibitors. These inhibitors were shown to hinder emergence of cancer cells resistant to targeted therapies, suggesting that KDM5 inhibition can be combined with these treatments in the clinic.

Biography

Dr. Qin Yan （严钦） is an Associate Professor of Pathology at Yale Medical School and a member of Yale Comprehensive Cancer Center and Yale Stem Cell Center. He directs a research laboratory to elucidate the roles of epigenetic mechanisms that drive tumor initiation and progression and to translate the findings to the clinic. His laboratory has made significant contributions to the understanding of H3K4me3/2 histone demethylases. Dr. Yan received his B.S. degree from the University of Science and Technology of China. After his Ph.D. training on regulation of transcription and ubiquitination with Drs. Joan and Ronald Conaway at the Oklahoma Medical Research Foundation and Stowers Institute for Medical Research, he completed his postdoctoral training on cancer biology with HHMI Investigator Dr. William Kaelin at the Dana-Farber Cancer Institute and Harvard Medical School. He has received numerous awards including Era of Hope Scholar Award from Dod Breast Cancer Research Program, Stewart Scholar Award and V Scholar Award.